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(54) SILICON SINGLE CRYSTAL WAFER AND ITS PRODUCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a wafer in which substantially no void having size equal to a prescribed value or larger exists and which can be treated in a treatment stage such as heat treatment stage to obtain a treated product wafer having drastically reduced density of voids existing in the surface as compared with a conventional similar treated product wafer, and from which a product excellent in oxide film dielectric strength can be manufactured, and also to provide the production process of the wafer.

SOLUTION: In this wafer which is produced from a single crystal pulled up by a Czochralski method, the size distribution of voids that appear in the surface of the wafer meets the following conditions: the number of voids having $0.1\text{-}0.15 \mu\text{m}$ size is $\geq 85\%$ of the total void number (wherein the term 'total void number' is defined as the total number of voids that exist in the wafer surface and have $\geq 0.1 \mu\text{m}$ size); and substantially no void having $\geq 0.20 \mu\text{m}$ size exists in the wafer surface.

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